

~~10363237~~ 10/227 398
~~10/217398~~

Connecting via Winsock to STN

Welcome to STN International! Enter x:X

LOGINID:sssptal623hrr

PASSWORD:

TERMINAL (ENTER 1, 2, 3, OR ?):2

* * * * * Welcome to STN International * * * * *

NEWS 1 Web Page URLs for STN Seminar Schedule - N. America
NEWS 2 "Ask CAS" for self-help around the clock
NEWS 3 May 12 EXTEND option available in structure searching
NEWS 4 May 12 Polymer links for the POLYLINK command completed in REGISTRY
NEWS 5 May 27 New UPM (Update Code Maximum) field for more efficient patent
SDIs in CApplus
NEWS 6 May 27 CApplus super roles and document types searchable in REGISTRY
NEWS 7 Jun 28 Additional enzyme-catalyzed reactions added to CASREACT
NEWS 8 Jun 28 ANTE, AQUALINE, BIOENG, CIVILENG, ENVIROENG, MECHENG,
and WATER from CSA now available on STN(R)
NEWS 9 Jul 12 BEILSTEIN enhanced with new display and select options,
resulting in a closer connection to BABS
NEWS 10 Jul 30 BEILSTEIN on STN workshop to be held August 24 in conjunction
with the 228th ACS National Meeting

NEWS EXPRESS JULY 30 CURRENT WINDOWS VERSION IS V7.01, CURRENT
MACINTOSH VERSION IS V6.0c(ENG) AND V6.0Jc(JP),
AND CURRENT DISCOVER FILE IS DATED 26 APRIL 2004
NEWS HOURS STN Operating Hours Plus Help Desk Availability
NEWS INTER General Internet Information
NEWS LOGIN Welcome Banner and News Items
NEWS PHONE Direct Dial and Telecommunication Network Access to STN
NEWS WWW CAS World Wide Web Site (general information)

Enter NEWS followed by the item number or name to see news on that
specific topic.

All use of STN is subject to the provisions of the STN Customer
agreement. Please note that this agreement limits use to scientific
research. Use for software development or design or implementation
of commercial gateways or other similar uses is prohibited and may
result in loss of user privileges and other penalties.

* * * * * STN Columbus * * * * *

FILE 'HOME' ENTERED AT 13:03:36 ON 31 JUL 2004

=> file regis

COST IN U.S. DOLLARS

SINCE FILE

TOTAL

ENTRY

SESSION

FULL ESTIMATED COST

0.21

0.21

FILE 'REGISTRY' ENTERED AT 13:03:49 ON 31 JUL 2004

USE IS SUBJECT TO THE TERMS OF YOUR STN CUSTOMER AGREEMENT.

PLEASE SEE "HELP USAGETERMS" FOR DETAILS.

COPYRIGHT (C) 2004 American Chemical Society (ACS)

10363237

Property values tagged with IC are from the ZIC/VINITI data file provided by InfoChem.

STRUCTURE FILE UPDATES: 30 JUL 2004 HIGHEST RN 719995-95-6
DICTIONARY FILE UPDATES: 30 JUL 2004 HIGHEST RN 719995-95-6

TSCA INFORMATION NOW CURRENT THROUGH MAY 21, 2004

Please note that search-term pricing does apply when conducting SmartSELECT searches.

Crossover limits have been increased. See HELP CROSSOVER for details.

Experimental and calculated property data are now available. For more information enter HELP PROP at an arrow prompt in the file or refer to the file summary sheet on the web at:
<http://www.cas.org/ONLINE/DBSS/registryss.html>

=>

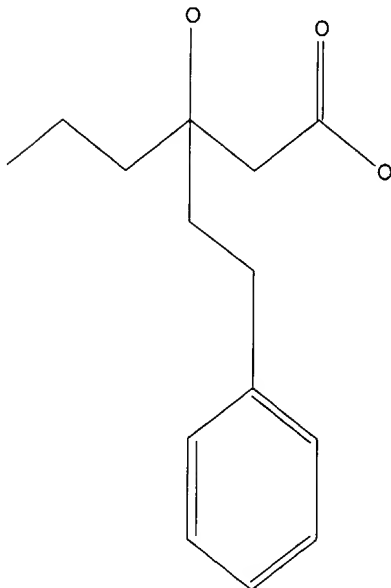
Uploading C:\STNEXP4\QUERIES\10727398.str

L1 STRUCTURE UPLOADED

=> d l1

L1 HAS NO ANSWERS

L1 STR



Structure attributes must be viewed using STN Express query preparation.

=> s l1 full

FULL SEARCH INITIATED 13:04:10 FILE 'REGISTRY'

FULL SCREEN SEARCH COMPLETED - 10076 TO ITERATE

100.0% PROCESSED 10076 ITERATIONS
SEARCH TIME: 00.00.01

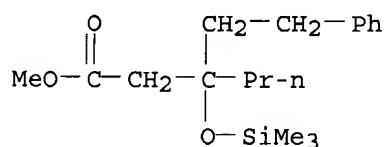
14 ANSWERS

L2 14 SEA SSS FUL L1

10363237

=> d 1-14 12

L2 ANSWER 1 OF 14 REGISTRY COPYRIGHT 2004 ACS on STN
RN 672284-81-0 REGISTRY
CN Benzenepentanoic acid, β -propyl- β -[(trimethylsilyl)oxy]-, methyl ester (9CI) (CA INDEX NAME)
OTHER NAMES:
CN 3-[(Trimethylsilyl)oxy]-3-(2-phenylethyl)capronic acid methyl ester
MF C18 H30 O3 Si
SR CA
LC STN Files: CA, CAPLUS, CASREACT, USPATFULL
DT.CA CAplus document type: Patent
RL.P Roles from patents: PREP (Preparation)



PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT

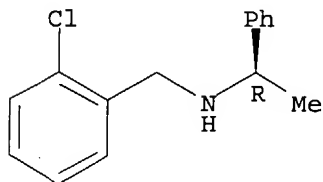
1 REFERENCES IN FILE CA (1907 TO DATE)
1 REFERENCES IN FILE CAPLUS (1907 TO DATE)

L2 ANSWER 2 OF 14 REGISTRY COPYRIGHT 2004 ACS on STN
RN 577979-84-1 REGISTRY
CN Benzenepentanoic acid, β -hydroxy- β -propyl-, (β R)-, compd. with (α R)-N-[(2-chlorophenyl)methyl]- α -methylbenzenemethanamine (1:1) (9CI) (CA INDEX NAME)
FS STEREOSEARCH
MF C15 H16 Cl N . C14 H20 O3
SR CA
LC STN Files: CA, CAPLUS, USPAT2, USPATFULL
DT.CA CAplus document type: Patent
RL.P Roles from patents: PREP (Preparation); RACT (Reactant or reagent)

CM 1

CRN 577979-82-9
CMF C15 H16 Cl N

Absolute stereochemistry.

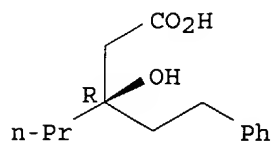


CM 2

CRN 215316-59-9
CMF C14 H20 O3

10363237

Absolute stereochemistry. Rotation (-).



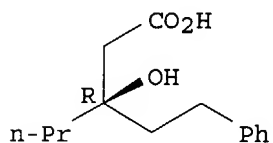
1 REFERENCES IN FILE CA (1907 TO DATE)
1 REFERENCES IN FILE CAPLUS (1907 TO DATE)

L2 ANSWER 3 OF 14 REGISTRY COPYRIGHT 2004 ACS on STN
RN 577979-83-0 REGISTRY
CN Benzenepentanoic acid, β -hydroxy- β -propyl-, (β R)-, compd.
with (R)-3,4-dimethoxy-N-(1-phenylethyl)benzenemethanamine (1:1) (9CI)
(CA INDEX NAME)
FS STEREOSEARCH
MF C17 H21 N O2 . C14 H20 O3
SR CA
LC STN Files: CA, CAPLUS, USPAT2, USPATFULL
DT.CA Caplus document type: Patent
RL.P Roles from patents: PREP (Preparation); RACT (Reactant or reagent)

CM 1

CRN 215316-59-9
CMF C14 H20 O3

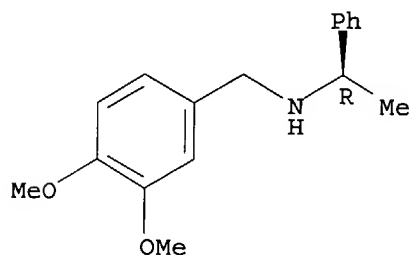
Absolute stereochemistry. Rotation (-).



CM 2

CRN 134430-93-6
CMF C17 H21 N O2

Absolute stereochemistry.

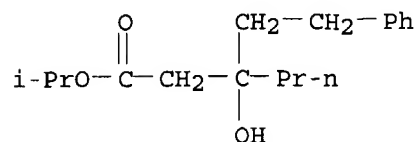


1 REFERENCES IN FILE CA (1907 TO DATE)
1 REFERENCES IN FILE CAPLUS (1907 TO DATE)

L2 ANSWER 4 OF 14 REGISTRY COPYRIGHT 2004 ACS on STN

10363237

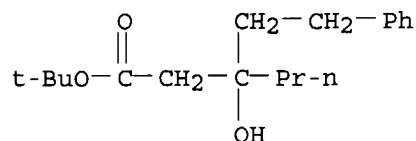
RN 577979-81-8 REGISTRY
CN Benzenepentanoic acid, β -hydroxy- β -propyl-, 1-methylethyl ester
(9CI) (CA INDEX NAME)
FS 3D CONCORD
MF C17 H26 O3
SR CA
LC STN Files: CA, CAPLUS, USPAT2, USPATFULL
DT.CA CAplus document type: Patent
RL.P Roles from patents: PREP (Preparation); RACT (Reactant or reagent)



PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT

1 REFERENCES IN FILE CA (1907 TO DATE)
1 REFERENCES IN FILE CAPLUS (1907 TO DATE)

L2 ANSWER 5 OF 14 REGISTRY COPYRIGHT 2004 ACS on STN
RN 577979-80-7 REGISTRY
CN Benzenepentanoic acid, β -hydroxy- β -propyl-, 1,1-dimethylethyl
ester (9CI) (CA INDEX NAME)
FS 3D CONCORD
MF C18 H28 O3
SR CA
LC STN Files: CA, CAPLUS, USPAT2, USPATFULL
DT.CA CAplus document type: Patent
RL.P Roles from patents: PREP (Preparation); RACT (Reactant or reagent)



PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT

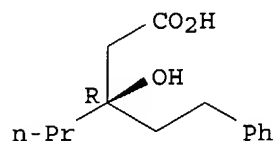
1 REFERENCES IN FILE CA (1907 TO DATE)
1 REFERENCES IN FILE CAPLUS (1907 TO DATE)

L2 ANSWER 6 OF 14 REGISTRY COPYRIGHT 2004 ACS on STN
RN 524066-98-6 REGISTRY
CN Benzenepentanoic acid, β -hydroxy- β -propyl-, (β R)-, compd.
with 4-[[[(1R)-2-(4-methylphenyl)-1-phenylethyl]amino]methyl]phenol (1:1)
(9CI) (CA INDEX NAME)
FS STEREOSEARCH
MF C22 H23 N O . C14 H20 O3
SR CA
LC STN Files: CA, CAPLUS
DT.CA CAplus document type: Patent
RL.P Roles from patents: PREP (Preparation); RACT (Reactant or reagent)

10363237

CRN 215316-59-9
CMF C14 H20 O3

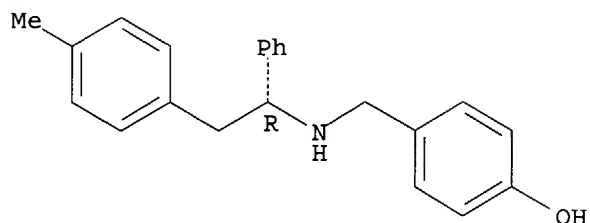
Absolute stereochemistry. Rotation (-).



CM 2

CRN 146395-40-6
CMF C22 H23 N O

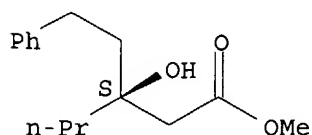
Absolute stereochemistry.



1 REFERENCES IN FILE CA (1907 TO DATE)
1 REFERENCES IN FILE CAPLUS (1907 TO DATE)

L2 ANSWER 7 OF 14 REGISTRY COPYRIGHT 2004 ACS on STN
RN 503322-47-2 REGISTRY
CN Benzenepentanoic acid, β -hydroxy- β -propyl-, methyl ester,
(β S) - (9CI) (CA INDEX NAME)
FS STEREOSEARCH
MF C15 H22 O3
SR CA
LC STN Files: CA, CAPLUS, CASREACT, USPATFULL
DT.CA Caplus document type: Patent
RL.P Roles from patents: BIOL (Biological study); PREP (Preparation); PROC
(Process)

Absolute stereochemistry.



PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT

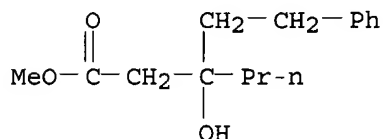
1 REFERENCES IN FILE CA (1907 TO DATE)
1 REFERENCES IN FILE CAPLUS (1907 TO DATE)

L2 ANSWER 8 OF 14 REGISTRY COPYRIGHT 2004 ACS on STN

```

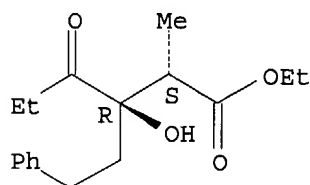
RN      385812-12-4   REGISTRY
CN      Benzenepentanoic acid,  $\beta$ -hydroxy- $\beta$ -propyl-, methyl ester (9CI)
        (CA INDEX NAME)
OTHER NAMES:
CN      3-Hydroxy-3-(2-phenylethyl)hexanoic acid methyl ester
FS      3D CONCORD
MF      C15 H22 O3
SR      CA
LC      STN Files:   CA, CAPLUS, CASREACT, USPAT2, USPATFULL
DT.CA   Caplus document type: Patent
RL.P    Roles from patents: BIOL (Biological study); PREP (Preparation); PROC
        (Process); RACT (Reactant or reagent)

```



3 REFERENCES IN FILE CA (1907 TO DATE)
3 REFERENCES IN FILE CAPLUS (1907 TO DATE)

Absolute stereochemistry. Rotation (-).



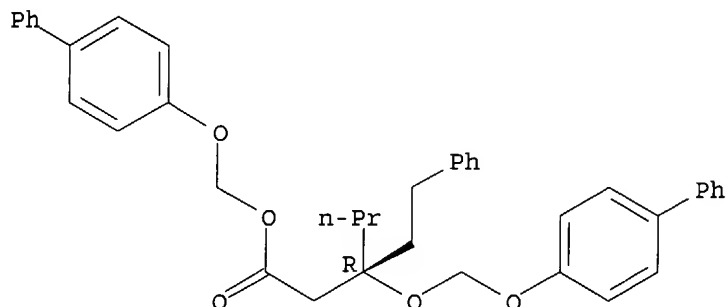
1 REFERENCES IN FILE CA (1907 TO DATE)
1 REFERENCES IN FILE CAPLUS (1907 TO DATE)

```
L2  ANSWER 10 OF 14  REGISTRY  COPYRIGHT 2004 ACS on STN
RN  215317-08-1  REGISTRY
CN  Benzenepentanoic acid,  $\beta$ -[[[1,1'-biphenyl]-4-yloxy)methoxy]- $\beta$ -
    propyl-, ([1,1'-biphenyl]-4-yloxy)methyl ester, ( $\beta$ R)- (9CI) (CA
    INDEX NAME)
FS  STEREOSEARCH
MF  C40 H40 O5
```

10363237

SR CA
LC STN Files: CA, CAPLUS, USPATFULL
DT.CA Caplus document type: Journal; Patent
RL.P Roles from patents: PREP (Preparation); RACT (Reactant or reagent)
RL.NP Roles from non-patents: PREP (Preparation); RACT (Reactant or reagent)

Absolute stereochemistry. Rotation (-).



PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT

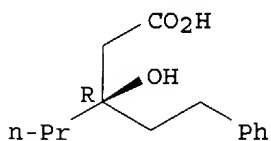
2 REFERENCES IN FILE CA (1907 TO DATE)
2 REFERENCES IN FILE CAPLUS (1907 TO DATE)

L2 ANSWER 11 OF 14 REGISTRY COPYRIGHT 2004 ACS on STN
RN 215316-60-2 REGISTRY
CN Benzenepentanoic acid, β -hydroxy- β -propyl-, (β R)-, compd.
with (α R)- α -[(1S)-1-aminoethyl]benzenemethanol (1:1) (9CI)
(CA INDEX NAME)
OTHER CA INDEX NAMES:
CN Benzenemethanol, α -[(1S)-1-aminoethyl]-, (α R)-,
mono[(β R)- β -hydroxy- β -propylbenzenepentanoate] (salt) (9CI)
FS STEREOSEARCH
MF C14 H20 O3 . C9 H13 N O
SR CA
LC STN Files: CA, CAPLUS, USPATFULL
DT.CA Caplus document type: Journal; Patent
RL.P Roles from patents: PREP (Preparation); RACT (Reactant or reagent)
RL.NP Roles from non-patents: PREP (Preparation); RACT (Reactant or reagent)

CM 1

CRN 215316-59-9
CMF C14 H20 O3

Absolute stereochemistry. Rotation (-).

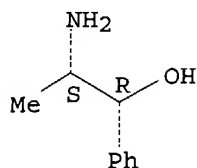


CM 2

CRN 492-41-1
CMF C9 H13 N O

10363237

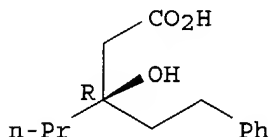
Absolute stereochemistry. Rotation (-).



3 REFERENCES IN FILE CA (1907 TO DATE)
3 REFERENCES IN FILE CAPLUS (1907 TO DATE)

L2 ANSWER 12 OF 14 REGISTRY COPYRIGHT 2004 ACS on STN
RN 215316-59-9 REGISTRY
CN Benzenepentanoic acid, β-hydroxy-β-propyl-, (βR) - (9CI)
(CA INDEX NAME)
FS STEREOSEARCH
MF C14 H20 O3
CI COM
SR CA
LC STN Files: CA, CAPLUS, CASREACT, USPAT2, USPATFULL
DT.CA CAplus document type: Journal; Patent
RL.P Roles from patents: BIOL (Biological study); PREP (Preparation); RACT
(Reactant or reagent)
RL.NP Roles from non-patents: PREP (Preparation); RACT (Reactant or reagent)

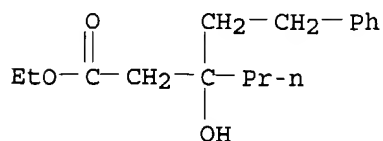
Absolute stereochemistry. Rotation (-).



PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT

4 REFERENCES IN FILE CA (1907 TO DATE)
4 REFERENCES IN FILE CAPLUS (1907 TO DATE)

L2 ANSWER 13 OF 14 REGISTRY COPYRIGHT 2004 ACS on STN
RN 215316-55-5 REGISTRY
CN Benzenepentanoic acid, β-hydroxy-β-propyl-, ethyl ester (9CI)
(CA INDEX NAME)
FS 3D CONCORD
MF C16 H24 O3
SR CA
LC STN Files: CA, CAPLUS, USPAT2, USPATFULL
DT.CA CAplus document type: Journal; Patent
RL.P Roles from patents: PREP (Preparation); RACT (Reactant or reagent)
RL.NP Roles from non-patents: PREP (Preparation); RACT (Reactant or reagent)

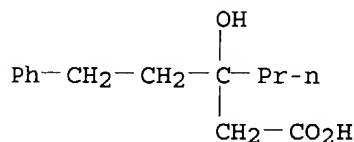


10363237

PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT

6 REFERENCES IN FILE CA (1907 TO DATE)
6 REFERENCES IN FILE CAPLUS (1907 TO DATE)

L2 ANSWER 14 OF 14 REGISTRY COPYRIGHT 2004 ACS on STN
RN 215316-49-7 REGISTRY
CN Benzenepentanoic acid, β -hydroxy- β -propyl- (9CI) (CA INDEX
NAME)
FS 3D CONCORD
MF C14 H20 O3
SR CA
LC STN Files: CA, CAPLUS, CASREACT, USPAT2, USPATFULL
DT.CA Caplus document type: Journal; Patent
RL.P Roles from patents: PREP (Preparation); RACT (Reactant or reagent)
RL.NP Roles from non-patents: PREP (Preparation); RACT (Reactant or reagent)



PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT

6 REFERENCES IN FILE CA (1907 TO DATE)
6 REFERENCES IN FILE CAPLUS (1907 TO DATE)

=> file caplus
COST IN U.S. DOLLARS

SINCE FILE	TOTAL
ENTRY	SESSION
181.04	181.25

FULL ESTIMATED COST

FILE 'CAPLUS' ENTERED AT 13:05:19 ON 31 JUL 2004
USE IS SUBJECT TO THE TERMS OF YOUR STN CUSTOMER AGREEMENT.
PLEASE SEE "HELP USAGETERMS" FOR DETAILS.
COPYRIGHT (C) 2004 AMERICAN CHEMICAL SOCIETY (ACS)

Copyright of the articles to which records in this database refer is held by the publishers listed in the PUBLISHER (PB) field (available for records published or updated in Chemical Abstracts after December 26, 1996), unless otherwise indicated in the original publications. The CA Lexicon is the copyrighted intellectual property of the American Chemical Society and is provided to assist you in searching databases on STN. Any dissemination, distribution, copying, or storing of this information, without the prior written consent of CAS, is strictly prohibited.

FILE COVERS 1907 - 31 Jul 2004 VOL 141 ISS 6
FILE LAST UPDATED: 30 Jul 2004 (20040730/ED)

This file contains CAS Registry Numbers for easy and accurate substance identification.

=> s l2 full

10363237

L3 12 L2

=> d 1-12 bib abs 13

L3 ANSWER 1 OF 12 CAPLUS COPYRIGHT 2004 ACS on STN
AN 2004:214596 CAPLUS
DN 140:270372
TI Procedure for the separation of zinc salts from non-aqueous synthesis
solutions containing zinc alcoholates or zinc amides
IN Sorger, Klas; Petersen, Hermann; Stohrer, Juergen
PA Consortium fuer Elektrochemische Industrie G.m.b.H., Germany
SO Ger. Offen., 13 pp.
CODEN: GWXXBX
DT Patent
LA German
FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	DE 10237274	A1	20040318	DE 2002-10237274	20020814
	EP 1405839	A1	20040407	EP 2003-17575	20030807
	R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO, MK, CY, AL, TR, BG, CZ, EE, HU, SK				
	US 2004089613	A1	20040513	US 2003-639804	20030812
PRAI	DE 2002-10237274	A	20020814		

OS CASREACT 140:270372

AB The invention describes a procedure for the removal of zinc from organic
solns., containing zinc alcoholates or zinc amides, and is characterized by
the fact that the solution from alkylations, arylations, acylations or
silylations is mixed with a precipitation reagent, containing at least two
nitrogen

donors, and subsequently the precipitating solid is separated Thus,
AcOCHPhCH2CO2Me

was prepared in 89% yield via the Reformatsky reaction of PhCHO with
BrCH2CO2Me in THF containing zinc powder, followed by acetylation with AcCl;
the zinc salt was removed via adding piperazine, removal of solvent,
redissoln. of the residue in pentane and the precipitation of the zinc

piperazine
complex.

L3 ANSWER 2 OF 12 CAPLUS COPYRIGHT 2004 ACS on STN
AN 2003:633631 CAPLUS
DN 139:179885
TI Process for producing (R)-3-hydroxy-3-(2-phenylethyl)hexanoic acid and
intermediates therefor
IN Tanaka, Masahide; Matsui, Kozo; Katsura, Tadashi; Iwasaki, Mitsuhiro;
Maeda, Hiroshi; Itaya, Nobushige
PA Sumika Fine Chemicals Co., Ltd., Japan
SO PCT Int. Appl., 85 pp.
CODEN: PIXXD2

DT Patent
LA Japanese

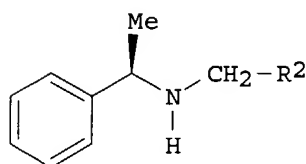
FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	WO 2003066564	A1	20030814	WO 2002-JP11348	20021031
	W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, OM, PH, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM				

10363237

RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW, AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG

US 2003176507 A1 20030918 US 2002-320325 20021216
 US 6683207 B2 20040127
 US 2004138496 A1 20040715 US 2003-727398 20031204
 PRAI JP 2002-30724 A 20020207
 JP 2002-41480 A 20020219
 JP 2002-105772 A 20020408
 JP 2002-242741 A 20020822
 US 2002-320325 A3 20021216
 GI



AB This document discloses a process for producing (R)-3-hydroxy-3-(2-phenylethyl)hexanoic acid characterized in that racemic 3-hydroxy-3-(2-phenylethyl)hexanoic acid is optically resolved by using an optically active amine represented by the general formula I [R2 represents 3,4-dimethoxyphenyl or 2-chlorophenyl]. (R)-3-Hydroxy-3-(2-phenylethyl)hexanoic acid, useful as an intermediate for an anti-HIV drug, can be efficiently produced with high optical purity and in a relatively high total yield.

RE.CNT 15 THERE ARE 15 CITED REFERENCES AVAILABLE FOR THIS RECORD
 ALL CITATIONS AVAILABLE IN THE RE FORMAT

L3 ANSWER 3 OF 12 CAPLUS COPYRIGHT 2004 ACS on STN

AN 2003:366786 CAPLUS

DN 138:368614

TI Preparation of (R)-3-hydroxy-3-(2-phenylethyl)hexanoic acid by optical resolution

IN Tanaka, Masahide; Matsui, Koze; Itaya, Nobushige

PA Sumika Fine Chemicals Co., Ltd., Japan

SO Jpn. Kokai Tokkyo Koho, 8 pp.

CODEN: JKXXAF

DT Patent

LA Japanese

FAN.CNT 1

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI JP 2003137835	A2	20030514	JP 2001-333291	20011030
PRAI JP 2001-333291		20011030		

AB The compound, useful as an intermediate for anti-HIV agents, is prepared by optical resolution of racemic 3-hydroxy-3-(2-phenylethyl)hexanoic acid with (R)-N-p-hydroxybenzyl- α -phenyl- β -p-tolyethylaniline. Racemic-3-hydroxy-3-(2-phenylethyl)hexanoic acid was reacted with (R)-N-p-hydroxybenzyl- α -phenyl- β -p-tolyethylaniline in AcOEt at 70° and recrystd. in 2-PrOH to give a salt with 99.8% e.e., which was treated with NaHCO₃ in AcOEt at 45° to give 94% (R)-3-hydroxy-3-(2-phenylethyl)hexanoic acid.

L3 ANSWER 4 OF 12 CAPLUS COPYRIGHT 2004 ACS on STN

AN 2003:286992 CAPLUS

NPA *Apples*

MW

10363237

DN 138:304057
TI Activated zinc and uses thereof and production methods therefor and production methods for ethyl 3-hydroxy-3-(2-phenylethyl)hexanoate therewith
IN Tanaka, Masahide; Matsui, Kozo; Itaya, Nobushige
PA Sumika Fine Chemicals Co., Ltd., Japan
SO Jpn. Kokai Tokkyo Koho, 10 pp.
CODEN: JKXXAF
DT Patent
LA Japanese
FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	JP 2003112045	A2	20030415	JP 2001-308011	20011003
PRAI	JP 2001-308011		20011003		

AB Zinc is activated by chlorotrimethylsilane (I) and Cu compds. in aprotic solvents. Thus, Zn was treated with I and Cu(II) acetylacetonate and used in the reaction of 1-phenyl-3-hexanone with Et bromoacetate to prepare the title compound

Handwritten: Jane Jones

L3 ANSWER 5 OF 12 CAPLUS COPYRIGHT 2004 ACS on STN
AN 2003:259778 CAPLUS
DN 138:270415
TI Lipase catalyzed kinetic resolution of β -hydroxy carboxylic acid esters
IN Popp, Alfred; Petersen, Hermann; Stohrer, Juergen; Rockinger-Mechlem, Jodoca; Gilch, Andrea
PA Consortium Fuer Elektrochemische Industrie G.m.b.H., Germany
SO Eur. Pat. Appl., 13 pp.
CODEN: EPXXDW
DT Patent
LA German
FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	EP 1298218	A1	20030402	EP 2002-21271	20020919
	R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO, MK, CY, AL, TR, BG, CZ, EE, SK				
	DE 10147653	A1	20030424	DE 2001-10147653	20010927
	US 2003109029	A1	20030612	US 2002-255776	20020926
PRAI	DE 2001-10147653	A	20010927		

OS CASREACT 138:270415; MARPAT 138:270415
AH A process is provided for the production of enantiomerically pure β -hydroxycarboxylic acids by enzymic kinetic resolution of a racemic mixture. Thus, racemic Me 3-hydroxy-5-phenyl-3-propyl-(E)-4-pentenoate was kinetically resolved at pH 8.0 with Novozyme® 525F to yield the R enantiomer. The aqueous reaction mixture was extracted with Me tert-Bu ether (MBTE), filtered through sodium sulfate and concentrated under vacuum. The residue contained (R)-(+)-Me 3-hydroxy-5-phenyl-3-propyl-(E)-4-pentenoate with an enantiomeric excess of 72%. The remaining aqueous phase was acidified to pH 2.0 and extracted with MBTE and the organic phase was also filtered through sodium sulfate and concentrated under vacuum. The residue from this extraction yielded (S)-(-)-3-hydroxy-5-phenyl-3-propyl-(E)-4-pentenoic acid with an enantiomeric excess of 96%.

Handwritten: Doppel

RE.CNT 6 THERE ARE 6 CITED REFERENCES AVAILABLE FOR THIS RECORD
ALL CITATIONS AVAILABLE IN THE RE FORMAT

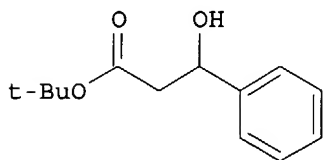
L3 ANSWER 6 OF 12 CAPLUS COPYRIGHT 2004 ACS on STN
AN 2003:131815 CAPLUS
DN 138:187401
TI Preparation of hydroxycarboxylic esters and related compounds via a

10363237

Reformatskii reaction of active halogen compounds with aldehydes, ketones, imines, etc. in carboxylate ester solvents
IN Sorger, Klas; Petersen, Hermann; Stohrer, Juergen
PA Consortium fuer Elektrochemische Industrie GmbH, Germany
SO Ger., 10 pp.
CODEN: GWXXAW
DT Patent
LA German
FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	DE 10161335	C1	20030220	DE 2001-10161335	20011213
	EP 1319664	A1	20030618	EP 2002-26495	20021128
	EP 1319664	B1	20040317		
	R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO, MK, CY, AL, TR, BG, CZ, EE, SK				
	AT 261978	E	20040415	AT 2002-26495	20021128
	US 2003114697	A1	20030619	US 2002-308397	20021203
	US 6603034	B2	20030805		
PRAI	DE 2001-10161335	A	20011213		
OS	CASREACT 138:187401; MARPAT 138:187401				
GI					

W P Auf



II

AB A process for the preparation of hydroxycarboxylic esters and related compds. via a Reformatskii reaction of active halogen compds. Hal-R3R4C-(X)1-Y [I; Hal= Cl, Br, I; R3, R4, R5, R6, R7 = H, halo, cyanoalkyl, etc.; X = C:CR5R6, CR5:CR6, R5C:CR6; L = 0-1; Y = CN, COZ, R5C:CR6R7, etc.; Z = (un)substituted haloalkyl with provisos; W = O, NR1] with aldehydes (R1R2C:W), ketones (R1R2C:W), imines (R1R2C:W), etc. in carboxylate ester solvents is disclosed. For example, Me3SiCl (15 mmol) was added to a suspension of Zn powder (122 mmol) in Et acetate (47 mL) under inert nitrogen atmospheric. The mixture was heated at 60°C for 15 min, then cooled to 55°C and bromoacetic acid tert-Bu ester (113 mmol) added at such a rate as to maintain a reaction temperature of 65°C. The reaction was stirred at 50°C for 10 min, cooled to 0°C and benzaldehyde (94 mmol) added at such a rate as to maintain a reaction temperature of 10°C. The solution was stirred at 25°C for an addnl. 90 min, then at 35°C for 15 min, diluted with Et acetate (40 mL), followed by aqueous work-up and vacuum distillation to afford tert-Bu ester II in 97% yield.

Approx. 7-specific hydroxycarboxylic esters were prepared in 82-98% yield.
RE.CNT 1 THERE ARE 1 CITED REFERENCES AVAILABLE FOR THIS RECORD
ALL CITATIONS AVAILABLE IN THE RE FORMAT

L3 ANSWER 7 OF 12 CAPLUS COPYRIGHT 2004 ACS on STN
AN 2002:462489 CAPLUS
DN 137:33132
TI Preparation of carbonyl compounds by decomposition of β -hydroxycarboxylic acids in the presence of a Bronsted base in a

10363237

non-hydroxylic solvent
IN Sorger, Klas; Petersen, Hermann; Stohrer, Juergen
PA Consortium fuer Elektrochemische Industrie G.m.b.H., Germany
SO Eur. Pat. Appl., 8 pp.
CODEN: EPXXDW

DT Patent
LA German

FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	EP 1215188	A1	20020619	EP 2001-120749	20010906
	EP 1215188	B1	20031126		
	R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO, MK, CY, AL, TR				
	DE 10062178	A1	20020704	DE 2000-10062178	20001214
	AT 255082	E	20031215	AT 2001-120749	20010906
	US 2002077498	A1	20020620	US 2001-976988	20011012
	US 6506942	B2	20030114		
	JP 2002193867	A2	20020710	JP 2001-379948	20011213
PRAI	DE 2000-10062178	A	20001214		

OS CASREACT 137:33132; MARPAT 137:33132

AB R1R2CO [R1 = (substituted) (interrupted) C1-30 hydrocarbon group; R2 = H, (substituted) (interrupted) C1-30 hydrocarbon group] were prepared by decomposition of R1R2C(OH)CR3R4CO2M [R1, R2 as above; R3, R4 = H, halo, (substituted) (interrupted) C1-30 hydrocarbon group; M = H, alkali metal ion, alkaline earth metal ion, NH4+] in the presence of a Bronsted base selected from hydroxides, alkanolates, oxides, amides, and alkali metal and alkaline earth metal hydrides in a non-hydroxylic solvent. Thus, 3-hydroxy-3-(2-phenylethyl)hexanoic acid was added to NaOH granulates in C9H20 fraction followed by heating at 155° and stirring for 2 h at 150° to give 91% 1-phenylhexan-3-one.

RE.CNT 3 THERE ARE 3 CITED REFERENCES AVAILABLE FOR THIS RECORD
ALL CITATIONS AVAILABLE IN THE RE FORMAT

L3 ANSWER 8 OF 12 CAPLUS COPYRIGHT 2004 ACS on STN
AN 2002:9950 CAPLUS
DN 136:85751

TI Preparation of hydroxy and amino compounds by Reformatskii reaction of active halogen compounds with aldehydes, ketones, and imines using trimethylchlorosilane-activated zinc in carboxylate ester solvents.

IN Sorger, Klaus; Petersen, Hermann
PA Consortium fuer Elektrochemische Industrie G.m.b.H., Germany
SO Eur. Pat. Appl., 12 pp.
CODEN: EPXXDW

DT Patent
LA German

FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	EP 1167325	A1	20020102	EP 2001-109385	20010419
	R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO				
	DE 10031604	A1	20020117	DE 2000-10031604	20000629
	US 2002013501	A1	20020131	US 2001-891800	20010626
	US 6605716	B2	20030812		
	JP 2002047247	A2	20020212	JP 2001-193258	20010626
PRAI	DE 2000-10031604	A	20000629		

OS CASREACT 136:85751; MARPAT 136:85751

AB R1R2CWR3R4XY [I; R1, R2 = H, (substituted) alkyl; W = OH, NHR1; R3, R4 = H, halo, (substituted) alkyl; X = CH2:CR1R2, R1CH:CHR2; Y = cyano, ZCO, ZSO2, Z2P(O); Z = (substituted) alkyl, aryl, etc.], are prepared by (1) Reformatskii reaction of R1R2C:W1 (II; R1, R2 as above; W1 = O, NR1) with

WPS

*WPS
but
to check
check*

10363237

R7R3R4XY (III; R3, R4, X, Y as above; R7 = Cl, Br, iodo) and Zn in carboxylate ester solvents R5(O(CH2)m)NCO2((CH2)oCO2)p((CH2)qO)rR6 [R5, R6 = (O-interrupted) alkyl; m, n, o, p, q = 0-6] in such a way that II and III are together contacted with Zn or II is first contacted with Zn and then III, and (2) hydrolysis of the resulting product. Thus, Me3SiCl was added to Zn powder in AcOEt and the mixture was dropwise treated with a mixture of PhCH:NPh and BrCH2CO2Me over 8 min at 75° followed by stirring for 30 min at 60°. The reaction mixture in AcOEt was hydrolyzed with 25% aqueous NH3 to give 97% 1,3-diphenyl-2-azetidinone.

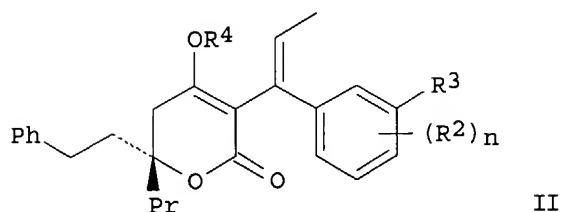
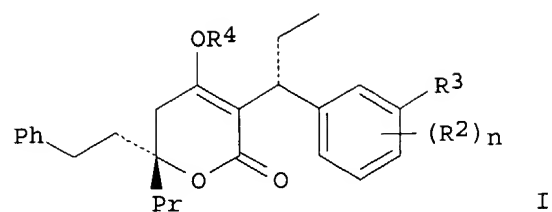
RE.CNT 2 THERE ARE 2 CITED REFERENCES AVAILABLE FOR THIS RECORD
ALL CITATIONS AVAILABLE IN THE RE FORMAT

L3 ANSWER 9 OF 12 CAPLUS COPYRIGHT 2004 ACS on STN
AN 2000:666724 CAPLUS
DN 133:252309
TI asymmetric hydrogenation of arylpropenylpyrones using rhodium phosphine catalysts.
IN Hewitt, Bradley D.; Burk, Mark J.; Johnson, Nicholas B.
PA Pharmacia & Upjohn Company, USA
SO PCT Int. Appl., 35 pp.
CODEN: PIXXD2
DT Patent
LA English
FAN.CNT 1

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI WO 2000055150	A1	20000921	WO 2000-US3720	20000314
W:	AE, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, CA, CH, CN, CR, CU, CZ, DE, DK, DM, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, TZ, UA, UG, US, UZ, VN, YU, ZA, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM			
RW:	GH, GM, KE, LS, MW, SD, SL, SZ, TZ, UG, ZW, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, BF, BJ, CF, CG, CI, CM, GA, GN, GW, ML, MR, NE, SN, TD, TG			
US 6211386	B1	20010403	US 2000-526976	20000314
EP 1161427	A1	20011212	EP 2000-915771	20000314
EP 1161427	B1	20021023		
R:	AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO			
AT 226579	E	20021115	AT 2000-915771	20000314
JP 2002539205	T2	20021119	JP 2000-605579	20000314
ES 2185582	T3	20030501	ES 2000-915771	20000314
PRAI US 1999-125051P	P	19990318		
WO 2000-US3720	W	20000314		
OS CASREACT 133:252309; MARPAT 133:252309				
GI				

*no
sub
matter*

10363237



AB Title compds. [I; R₂, R₃ = NO₂, NH₂, N(CH₂Ph)₂, 4-trifluoromethylpyridin-2-ylsulfonylamino, etc., Cl, Br, iodo, OH, OSO₂CF₃, etc.; R₄ = H, SiMe₃; n = 0, 1; with provisos], were prepared by hydrogenation of E-II or a mixture of E,Z-II (variables as above) in the presence of base and a catalyst containing Rh and a chiral ligand with ≥1 P atom. Thus, (Z)-II [(R₂)_n, R₄ = H; R₃ = NO₂] (preparation given) and [(1,5-cyclooctadiene)rhodium(I)-1,2-bis-(2R,5R)-dimethylphospholatobenzene] tetrafluoroborate in MeOH were stirred under ≥80 psig H₂ at 55° for 24 h to give I [(R₂)_n, R₄ = H; R₃ = NO₂].

RE.CNT 2 THERE ARE 2 CITED REFERENCES AVAILABLE FOR THIS RECORD
ALL CITATIONS AVAILABLE IN THE RE FORMAT

L3 ANSWER 10 OF 12 CAPLUS COPYRIGHT 2004 ACS on STN

AN 2000:597837 CAPLUS

DN 133:309563

TI High stereocontrol in aldol reaction with ketones: enantioselective synthesis of β-hydroxy γ-ketoesters by ester enolate aldol reactions with 2-acyl-2-alkyl-1,3-dithiane 1-oxides

AU Ruano, Jose L. Garcia; Barros, David; Maestro, M. Carmen; Slawin, Alexandra M. Z.; Page, Philip C. Bulman

CS Departamento de Quimica Organica, Universidad Autonoma, Madrid, 28049, Spain

SO Journal of Organic Chemistry (2000), 65(19), 6027-6034

CODEN: JOCEAH; ISSN: 0022-3263

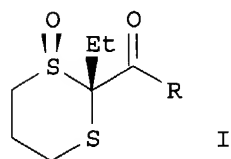
PB American Chemical Society

DT Journal

LA English

OS CASREACT 133:309563

GI



10363237

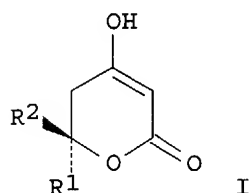
AB The asym. aldol reaction of 1,2-diketones, masked as nonracemic 2-acyl dithiane oxides anti-I (R = Me, Et, PhCH₂CH₂), with lithium enolates derived from several esters and lactones, proceeds with a high degree of stereocontrol at both carbonyl and enolate prochiral centers, the stereocontrol mainly determined by the configuration of the sulfoxide sulfur atom. The sense of induced stereochem. observed for ester enolates is different from that seen for lactone enolates. Hydrolysis of the dithiane oxide units of the major diastereoisomerically pure aldol products affords enantiomerically pure tertiary α -substituted β -hydroxy- γ -ketoesters, e.g., (2S,3R)-(-)-EtCOCMe(OH)CHMeCO₂Et.

RE.CNT 64 THERE ARE 64 CITED REFERENCES AVAILABLE FOR THIS RECORD
ALL CITATIONS AVAILABLE IN THE RE FORMAT

L3 ANSWER 11 OF 12 CAPLUS COPYRIGHT 2004 ACS on STN
AN 1999:194136 CAPLUS
DN 130:223169
TI Process to produce 4-hydroxy-2-oxo-pyran derivatives useful as protease inhibitors
IN Gage, James R.; Kelly, Robert C.; Hewitt, Bradley D.
PA Pharmacia & Upjohn Company, USA
SO PCT Int. Appl., 45 pp.
CODEN: PIXXD2
DT Patent
LA English
FAN.CNT 1

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 9912919	A1	19990318	WO 1998-US17993	19980903
W: AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, CA, CH, CN, CU, CZ, DE, DK, EE, ES, FI, GB, GE, GH, GM, HR, HU, ID, IL, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MD, MG, MK, MN, MW, MX, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, UA, UG, US, UZ, VN, YU, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM RW: GH, GM, KE, LS, MW, SD, SZ, UG, ZW, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, BF, BJ, CF, CG, CI, CM, GA, GN, GW, ML, MR, NE, SN, TD, TG				
CA 2300204	AA	19990318	CA 1998-2300204	19980903
AU 9892965	A1	19990329	AU 1998-92965	19980903
AU 743496	B2	20020124		
EP 1015441	A1	20000705	EP 1998-945806	19980903
EP 1015441	B1	20040512		
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO				
JP 2001515895	T2	20010925	JP 2000-510727	19980903
NZ 503338	A	20020301	NZ 1998-503338	19980903
NZ 516325	A	20021220	NZ 1998-516325	19980903
RU 2223958	C2	20040220	RU 2000-109277	19980903
US 6077963	A	20000620	US 1998-213887	19981217
US 6265604	B1	20010724	US 2000-514087	20000228
MX 200002411	A	20001030	MX 2000-2411	20000309
FI 2000000553	A	20000310	FI 2000-553	20000310
NO 2000001274	A	20000510	NO 2000-1274	20000310
PRAI US 1997-58618P	P	19970911		
NZ 1998-503338	A1	19980903		
US 1998-146406	A1	19980903		
WO 1998-US17993	W	19980903		
US 1998-213887	A3	19981217		
OS MARPAT 130:223169				
GI				

10363237



AB Disclosed is a novel process and novel intermediates to prepare [R-(R*,R*)]-N-[3-[1-[5,6-dihydro-4-hydroxy-2-oxo-6-(2-phenylethyl)-6-propyl-2H-pyran-3-yl]propyl]phenyl]-5-(trifluoromethyl)-2-pyridinesulfonamide, which is a protease inhibitor useful in treating humans infected with the HIV virus. The process includes preparation of a hydroxy lactone I (R1, R2 = alkyl, cyclohexyl, Ph, etc.).

RE.CNT 5 THERE ARE 5 CITED REFERENCES AVAILABLE FOR THIS RECORD
ALL CITATIONS AVAILABLE IN THE RE FORMAT

L3 ANSWER 12 OF 12 CAPLUS COPYRIGHT 2004 ACS on STN

AN 1998:622205 CAPLUS

DN 129:330624

TI A Convergent, Scalable Synthesis of HIV Protease Inhibitor PNU-140690

AU Fors, Kristina S.; Gage, James R.; Heier, Richard F.; Kelly, Robert C.; Perrault, William R.; Wicnienski, Nancy

CS Chemical Process Research Preparations, Pharmacia Upjohn Inc., Kalamazoo, MI, 49001, USA

SO Journal of Organic Chemistry (1998), 63(21), 7348-7356
CODEN: JOCEAH; ISSN: 0022-3263

PB American Chemical Society

DT Journal

LA English

AB PNU-140690, an inhibitor of the HIV protease enzyme undergoing clin. evaluation as a chemotherapeutic agent for treatment of AIDS, was synthesized by a convergent approach amenable to large-scale preparation in a pilot plant environment. The key step is the aldol addition of a nitro

aromatic ester to an aldehyde. The two stereocenters present in the target mol. were each set independently by resolution of enantiomers. Intermediates along the synthetic routes were chosen to maximize opportunities for isolation and purification by crystallization

RE.CNT 17 THERE ARE 17 CITED REFERENCES AVAILABLE FOR THIS RECORD
ALL CITATIONS AVAILABLE IN THE RE FORMAT

Handwritten signature or mark.

magnesium ref

Connecting via Winsock to STN

Welcome to STN International! Enter x:X

LOGINID:ssspta1623hrr

PASSWORD:

TERMINAL (ENTER 1, 2, 3, OR ?):2

* * * * * Welcome to STN International * * * * *

NEWS 1 Web Page URLs for STN Seminar Schedule - N. America
NEWS 2 "Ask CAS" for self-help around the clock
NEWS 3 May 12 EXTEND option available in structure searching
NEWS 4 May 12 Polymer links for the POLYLINK command completed in REGISTRY
NEWS 5 May 27 New UPM (Update Code Maximum) field for more efficient patent
SDIs in CAlplus
NEWS 6 May 27 CAlplus super roles and document types searchable in REGISTRY
NEWS 7 Jun 28 Additional enzyme-catalyzed reactions added to CASREACT
NEWS 8 Jun 28 ANTE, AQUALINE, BIOENG, CIVILENG, ENVIROENG, MECHENG,
and WATER from CSA now available on STN(R)
NEWS 9 Jul 12 BEILSTEIN enhanced with new display and select options,
resulting in a closer connection to BABS
NEWS 10 Jul 30 BEILSTEIN on STN workshop to be held August 24 in conjunction
with the 228th ACS National Meeting

NEWS EXPRESS JULY 30 CURRENT WINDOWS VERSION IS V7.01, CURRENT
MACINTOSH VERSION IS V6.0c(ENG) AND V6.0Jc(JP),
AND CURRENT DISCOVER FILE IS DATED 26 APRIL 2004
NEWS HOURS STN Operating Hours Plus Help Desk Availability
NEWS INTER General Internet Information
NEWS LOGIN Welcome Banner and News Items
NEWS PHONE Direct Dial and Telecommunication Network Access to STN
NEWS WWW CAS World Wide Web Site (general information)

Enter NEWS followed by the item number or name to see news on that
specific topic.

All use of STN is subject to the provisions of the STN Customer
agreement. Please note that this agreement limits use to scientific
research. Use for software development or design or implementation
of commercial gateways or other similar uses is prohibited and may
result in loss of user privileges and other penalties.

* * * * * STN Columbus * * * * *

FILE 'HOME' ENTERED AT 15:51:24 ON 31 JUL 2004

=> file caplus

COST IN U.S. DOLLARS

SINCE FILE

TOTAL

ENTRY

SESSION

FULL ESTIMATED COST

0.21

0.21

FILE 'CAPLUS' ENTERED AT 15:51:37 ON 31 JUL 2004

USE IS SUBJECT TO THE TERMS OF YOUR STN CUSTOMER AGREEMENT.

PLEASE SEE "HELP USAGETERMS" FOR DETAILS.

COPYRIGHT (C) 2004 AMERICAN CHEMICAL SOCIETY (ACS)

magnesium ref

Copyright of the articles to which records in this database refer is held by the publishers listed in the PUBLISHER (PB) field (available for records published or updated in Chemical Abstracts after December 26, 1996), unless otherwise indicated in the original publications. The CA Lexicon is the copyrighted intellectual property of the American Chemical Society and is provided to assist you in searching databases on STN. Any dissemination, distribution, copying, or storing of this information, without the prior written consent of CAS, is strictly prohibited.

FILE COVERS 1907 - 31 Jul 2004 VOL 141 ISS 6
FILE LAST UPDATED: 30 Jul 2004 (20040730/ED)

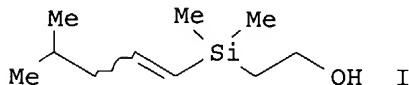
This file contains CAS Registry Numbers for easy and accurate substance identification.

=> s Reformatsky
L1 577 REFORMATSKY

=> s l1 and magnesium
406697 MAGNESIUM
L2 13 L1 AND MAGNESIUM

=> d 1-13 bib abs l2

L2 ANSWER 1 OF 13 CAPLUS COPYRIGHT 2004 ACS on STN
AN 1999:219606 CAPLUS
DN 131:102402
TI Synthesis and odor characteristics of isomeric 3,3,7-trimethyl-4-octen-1-ols and their 3-sila analogs
AU Obara, Robert; Wawrzenczyk, Czeslaw
CS Institute of Chemistry, Pedagogical University, Kielce, 25-020, Pol.
SO Journal of Cosmetic Science (1998), 49(5), 299-308
CODEN: JCSCFC
PB Society of Cosmetic Chemists
DT Journal
LA English
GI



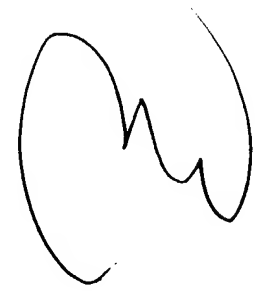
AB The isomeric (E)- and (Z)-3,3,7-trimethyl-4-octen-1-ols and their 3-sila analogs were synthesized. The (Z)-3,3,7-trimethyl-4-octen-1-ol was obtained by the isomerization of E-alc. via its epoxide deoxygenation according to the Vedejs method. Both sila analogs (E)-I and (Z)-I were synthesized from 4-methyl-1-pentyne. The carbon chain was elongated by alkyne silylation with dimethylvinylchlorosilane (synthesis of Z-isomer) or by hydrosilylation with dimethylchlorosilane followed by **Reformatsky** reaction with Et bromoacetate (synthesis of the E-isomer). Odors of the prepared alcs. and their acetates were evaluated. The odors of carbon compds. are more intense and more fresh than their silicon analogs.

RE.CNT 15 THERE ARE 15 CITED REFERENCES AVAILABLE FOR THIS RECORD
ALL CITATIONS AVAILABLE IN THE RE FORMAT

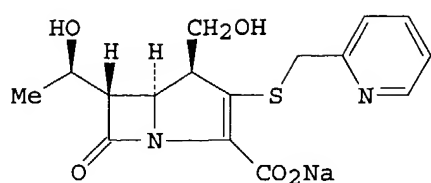
magnesium ref

L2 ANSWER 2 OF 13 CAPLUS COPYRIGHT 2004 ACS on STN
AN 1998:621520 CAPLUS
DN 129:330285
TI Organic synthesis by means of divalent lanthanoids. Samarium(II) iodide (SmI2). Reduction of functional groups and reductive carbon-carbon bond-forming reactions
AU Inanaga, Junji; Hanamoto, Takeshi
CS Inst. Fundam. Res. Org. Chem., Kyushu Univ., Fukuoka, 812-8581, Japan
SO Kikan Kagaku Sosetsu (1998), 37, 31-41
CODEN: KKSOEC
PB Nippon Kagakkai
DT Journal; General Review
LA Japanese
AB A review with 58 refs. Samarium (II) iodide has played an ever-increasing role as one of the most attractive one-electron reducing agents in organic synthesis since H.B. Kagan and his coworkers first prepared it as a THF solution and demonstrated its potential usefulness. Our finding that the addition of HMPA remarkably accelerates the SmI2-promoted reactions became another spur for further and intensive applications of this reagent to various types of electron transfer reactions. The emerging utility of SmI2 resides not only in its ability to reduce a variety of functional groups, but also in its capacity to promote a number of important carbon-carbon bond-forming reactions which proceed through either single-electron or two-electron processes such as pinacol coupling reactions, ketyl-olefin, -allene, -acetylene, or -hydrazone coupling reactions, radical cyclizations, Barbier-type reactions, aldol- or Reformatsky-type reactions, intramol. ester alkylations, carbenoid reactions, and so on. In addition, stereochem. course of these reactions can often be highly controlled on the coordination sphere of samarium. Thus, the chemical associated with SmI2-promoted reactions is highly complementary to more traditional organometallic chemical utilizing lithium, magnesium, or zinc. This article surveys recent progress in this field noting the important feature of this reagent.

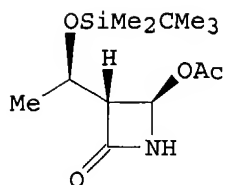
L2 ANSWER 3 OF 13 CAPLUS COPYRIGHT 2004 ACS on STN
AN 1994:408931 CAPLUS
DN 121:8931
TI Synthesis of a 4 β -(Hydroxymethyl)carbapenem
AU Mastalerz, Harold; Menard, Marcel
CS Bristol-Myers Squibb PRI, Wallingford, CT, 06492, USA
SO Journal of Organic Chemistry (1994), 59(11), 3223-6
CODEN: JOCEAH; ISSN: 0022-3263
DT Journal
LA English
OS CASREACT 121:8931
GI



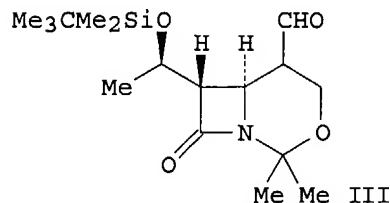
magnesium ref



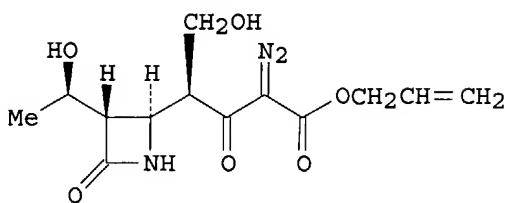
I



II



III



IV

AB A stereoselective synthesis of the 4 β -hydroxymethyl carbapenem I is described. **Reformatsky** reaction of Me 4-bromocrotonate with the acetoxyazetidinone II gave a 9:1 mixture of ester epimers. These were converted to a mixture of acetonides which, upon ozonolysis and equilibration with base, gave the thermodynamically more stable 5 α -aldehyde III. Conversion of III to the diazo-derivative followed by simultaneous hydrolysis of the acetonide and the silyl ether function gave the azetidinone IV. This was then converted to the carbapenem I.

L2 ANSWER 4 OF 13 CAPLUS COPYRIGHT 2004 ACS on STN

AN 1988:112751 CAPLUS

DN 108:112751

TI Stereochemistry of addition of allyl Grignard reagents to (R)-(+)-pulegone and other α,β -ethylenic ketones

AU El Idrissi, Mostafa; Santelli, Maurice

CS Cent. St-Jerome, CNRS, Marseille, 13397, Fr.

SO Journal of Organic Chemistry (1988), 53(5), 1010-16

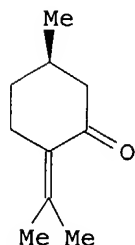
CODEN: JOCEAH; ISSN: 0022-3263

DT Journal

LA English

OS CASREACT 108:112751

GI

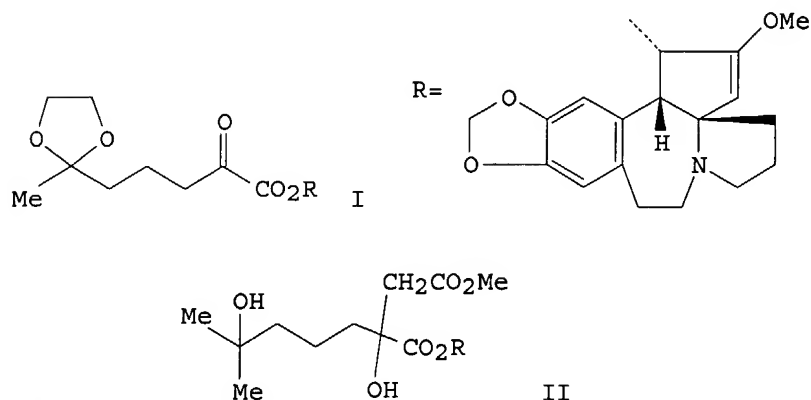


I

AB The 1,2-addition of allyl, crotyl, and 2-methyl-2-butenyl Grignard reagents to (R)-(+)-pulegone (I) is regio- and stereoselective. In contrast, 3-penten-2-yl and 3-methyl-2-butenyl Grignard reagents undergo 1,2- and 1,4-addns. A 'compact approach' stabilized by orbital interaction is the proposed mechanism. A further confirmation was obtained with acyclic enones.

magnesium ref

L2 ANSWER 5 OF 13 CAPLUS COPYRIGHT 2004 ACS on STN
AN 1985:471569 CAPLUS
DN 103:71569
TI Synthesis of homoharringtonine and separation of its stereomers
AU Wang, Yongkeng; Li, Yulin; Pan, Xinfu; Li, Shaobai; Huang, Wenkui
CS Inst. Org. Chem., Lanzhou Univ., Lanzhou, Peop. Rep. China
SO Huaxue Xuebao (1985), 43(2), 161-7
CODEN: HHHPA4; ISSN: 0567-7351
DT Journal
LA Chinese
OS CASREACT 103:71569
GI



MW

AB Grignard reaction of 1-bromo-4-(ethylenedioxy)pentane with di-Et oxalate gave Et 2-oxo-6-(ethylenedioxy)heptanoate which was converted to ester I. **Reformatsky** reaction of I with $\text{BrCH}_2\text{CO}_2\text{Et}$ followed by deketalization and reaction with MeMgI gave homoharringtonine (II) and its epimer. The separation is effected by fractional crystallization of their picrates.

L2 ANSWER 6 OF 13 CAPLUS COPYRIGHT 2004 ACS on STN
AN 1976:105806 CAPLUS
DN 84:105806
TI Synthesis of norpatchoulanol
AU Teisseire, P.; Pesnelle, P.; Corbier, B.; Plattier, M.; Maupetit, P.
CS Cent. Rech., Soc. Anonyme Roure Bertrand Dupont, Grasse, Fr.
SO Int. Congr. Essent. Oils, [Pap.], 6th (1974), 166, 6 pp. Publisher: Allured Publ. Corp., Oak Park, Ill.
CODEN: 31MAA8
DT Conference
LA French
GI For diagram(s), see printed CA Issue.
AB Norpatchoulanol (I) was synthesized from 1-methyl-1-cyclohexen-3-one in 14 steps via the diol II.

L2 ANSWER 7 OF 13 CAPLUS COPYRIGHT 2004 ACS on STN
AN 1976:44231 CAPLUS
DN 84:44231
TI Enolates of esters. V. Preparation of the lithium analogs of **Reformatsky** reagents from α, α -dichloro and α -monohalo esters. Reactivity
AU Villieras, Jean; Perriot, Pierre; Bourgain, Monique; Normant, Jean F.
CS Lab. Synth. Org., Univ. Paris VI, Paris, Fr.

magnesium ref

- SO Journal of Organometallic Chemistry (1975), 102(2), 129-40
CODEN: JORCAI; ISSN: 0022-328X
- DT Journal
LA French
AB The reaction of Li with α,α -dichloro esters and α,α -disubstituted α -monohalo esters (e.g., MeEtCClCO₂Me) in THF at -5 to 0° gave the lithio analogs of the corresponding **Reformatsky** reagents in 80-90% yields. Their reactivity were tested toward various electrophiles. It illustrates the wide scope of synthetic utility of these reagents (alkylation with primary and secondary alkyl bromides, hydroxyalkylation, acylation) and provides new routes to esters and α -chloro esters.
- L2 ANSWER 8 OF 13 CAPLUS COPYRIGHT 2004 ACS on STN
AN 1974:437356 CAPLUS
DN 81:37356
TI Substances related to mevalonic acid. VII. 2,3-Diphenyl-3-hydroxypentanoic acid and ethyl tanoate
AU Petrova, L. A.; Bel'tsova, N. N.; Mukhina, N. I.; Belyaeva, T. D.
CS Inst. Eksp. Med., Leningrad, USSR
SO Zhurnal Obshchei Khimii (1974), 44(5), 1158-61
CODEN: ZOKHA4; ISSN: 0044-460X
- DT Journal
LA Russian
AB Re-action of EtCOPh with the Ivanov reagent prepared from Mg, Me₂CHCl and PhCH₂CO₂H gave 67% diastereoisomers of EtCPh(OH)CHPhCO₂H. The acids were converted to their Me esters and their dibenzylethylenediamine, Na, and ethanolamine salts. PhCH₂CEt (OH) CH (CH₂Ph) CO₂Et was prepared (71%) by the **Reformatsky** reaction of EtCOCH₂Ph and PhCH₂CHBrCO₂Et.
- L2 ANSWER 9 OF 13 CAPLUS COPYRIGHT 2004 ACS on STN
AN 1971:76489 CAPLUS
DN 74:76489
TI Addition of allenic organometal derivatives and **Reformatsky** zinc-derivatives β to α -unsaturated [carbonyl] compounds
AU Moreau, Jean L.; Fragin, Yves; Gaudemar, Marcel
CS Lab. Synth. Organometall., Fac. Sci., Paris, Fr.
SO Bulletin de la Societe Chimique de France (1970), (12), 4511-12
CODEN: BSCFAS; ISSN: 0037-8968
- DT Journal
LA French
OS CASREACT 74:76489
AB The α -ethylenic ketones RR₁C:CHCOR₂ (R = R₁ = R₂ = Me or R = R₂ = Ph, R₁ = H) reacted with the organometallic allene derivs. CH₂:C:CHMBr (M = Mg or Zn) to give RR₁C:CHC(OH)R₂CH₂C.tplbond.CH. For R = R₂ = Ph, R₁ = H, and M = Zn, PhCH:CHC(OH)PhCH:C:CH₂ was also obtained. EtCH:C(CO₂Et)₂ reacted with BrZnCM₂CO₂Et to give EtO₂CCH₂CH(CO₂Et)₂, and iso-PrCH:C(CO₂Et)₂ reacted with BrZnCH:C:CH₂ to give CH.tplbond.CCH₂CH(Pr-iso)CH(CO₂Et)₂.
- L2 ANSWER 10 OF 13 CAPLUS COPYRIGHT 2004 ACS on STN
AN 1970:55675 CAPLUS
DN 72:55675
TI Ketone condensation with tert-butyl acetate organomagnesium derivatives. V. Stereochemistry of addition to saturated terpene ketones
AU Perry, Marcel; Maroni-Barnaud, Yvette
CS Lab. Syn. Phsicochim. Org., Fac. Sci., Toulouse, Fr.
SO Bulletin de la Societe Chimique de France (1969), (10), 3574-80
CODEN: BSCFAS; ISSN: 0037-8968
- DT Journal
LA French
GI For diagram(s), see printed CA Issue.

magnesium ref

AB CH₂:C(OMg-Cl)OBU-tert, is added to (-)-menthone, (+)-isomenthone, and (-)-carvomenthone to give β -hydroxy esters I, II, and III, in which the OH is axial (a). The Reformatskii reaction of BrCH₂CO₂Et give axial alcs. IV, V, and VI, and equatorial alcs. VII, VIII, and IX.

L2 ANSWER 11 OF 13 CAPLUS COPYRIGHT 2004 ACS on STN

AN 1960:74469 CAPLUS

DN 54:74469

OREF 54:14177h-i,14178a-i,14179a-c

TI Partial asymmetric synthesis of β -hydroxy acids. I.
 β -Hydroxy- β -phenylbutyric acid

AU Palmer, M. H.; Reid, Joan A.

CS Battersea Coll. Technol., London

SO Journal of the Chemical Society, Abstracts (1960) 931-8

CODEN: JCSAAZ; ISSN: 0590-9791

DT Journal

LA Unavailable

OS CASREACT 54:74469

AB Treatment of (-)-bornyl (I) or (-)- α -fenchyl bromoacetate (II) with PhAc in the presence of Zn was accompanied by partial asym. synthesis, as was shown by hydrolysis of the resulting ester to (-)-isomer of MeCPh(OH)CH₂CO₂H (III). The effect of variations in reaction conditions was studied. Asym. synthesis also occurred in the absence of Zn metal; thus, an organozinc derivative of the bromo ester may be prepared by treating

it

with Zn in the absence of PhAc which was subsequently added, or the metallic Zn may be replaced by Pr₂Zn or Pr₂Cd. (All $[\alpha]_D$ at 25°). The optically active alc. (1 mol) added to 1.15 mol α -chloroacyl chloride or α -bromoacyl bromide at room temperature with shaking, the mixture heated 1 h. at 100°, dissolved in Et₂O, the solution washed with 10% aqueous Na₂CO₃, dried, the ester isolated, and fractionally distilled [except (-)-menthyl chloroacetate (IV) which was recrystd. from 96% EtOH] gave the XCH₂CO₂R (V). (-)-Menthyl iodoacetate (VI) was prepared by heating IV in MeOH with KI. The phys. consts. of the V were as follows [X, R, b.p./mm., α , $[\alpha]_D$ (c, solvent) given]:
Cl, (-)-menthyl, -(m. 38.5-9.5°), -, -80.0° (1.63, CHCl₃);
Br, (-)-menthyl (VII), 74°/0.05 (m. 19.5-20.5°), -74.85°, -; Br, (+)-1-methylheptyl (VIII), 91°/1.5, 13.05°, -; Br, (-)-VIII, 85°/0.9, -12.25°, -; Br, (-)-bornyl, 104°/0.8, -40.44°, -30.2° (7.46, EtOH);
I, (-)-menthyl, 117-20°/0.9, -67.28°, -; Br, (-)- α -fenchyl, 83°/0.2 (n_{25D} 1.4887, d₂₅ 1.2640), -, -41.91°; Br, (+)-sec-Bu (IX), 72.5°/14 (n_{25D} 1.4465, d₂₅ 1.3250), -, 19.83°. (a) VII (6.31 g.) and 2.66 g. PhAc in 30 mL. C₆H₆ refluxed 4 h. in the presence of 1.55 g. Zn wool, the liquid decanted from 0.06 g. unchanged Zn which was washed with Et₂O and then H₂O, the combined liqs. mixed with 5 g. ice and 20 mL. 5N H₂SO₄, the aqueous layer extracted with Et₂O, the combined Et₂O exts. and the C₆H₆ solution washed with H₂O, dried, and concentrated (finally in vacuo) gave 6.8 g. product (X), oil.

X

boiled 4 h. with 11 mL. 2.5N KOH and 25 mL. 96% EtOH, the mixture diluted with 20 mL. H₂O, the EtOH removed in vacuo at 60°, the aqueous residue extracted with Et₂O (to remove neutral compds.), acidified with 5N H₂SO₄, extracted with Et₂O, the exts. washed with H₂O, dried, and the Et₂O removed gave 2.56 g. (-)-III, m. 68-70°, $[\alpha]_D$ 2.62° (c 10.87, EtOH), 30% optically pure, mol. weight (titration) 178. A similar experiment with 10 mL.

C₆H₆

and 5 mL. Et₂O in lieu of C₆H₆ gave 64% (+)-III, $[\alpha]_D$ 3.03° (c 7.33, EtOH). Replacing the C₆H₆ with 40 mL. PhMe gave 58% (+)-III, $[\alpha]_D$ 0.85° (c 10.36, EtOH). The typical **Reformatsky** reaction in C₆H₆ gave the following results with varied durations of heating [duration of heating (hrs.), % III, $[\alpha]_D$, c (EtOH) given]:

magnesium ref

1, 64, 2.75°, 11.03; 10, 60, 2.57°, 10.83; 20, 55, 2.32°, 10.55. Expts. in C₆H₆ with various potential catalysts gave the following results [catalyst, molar proportion, % yield III, [α]_D, c (EtOH) given]: CoCl₂, 0.05, 76, 2.67°, 10.52; MgBr₂, 1.5, 26, 2.04°, 8.80; ZnBr₂, 1.5, 42, 2.20°, 7.63; CdBr₂, 1.5, 77, 2.63°, 10.07. (b) Zn (4.7 g.) activated by heating with a crystal of iodine at 1 mm. until a white sublimate appeared on the walls of the flask, allowed to cool in vacuo, suspended in 50 mL. Et₂O, treated with 10.2 g. VII with vigorous stirring, treated with a few drops Et₂O-MeMgI, refluxed and stirred 90 min., the Et₂O solution decanted from Zn, treated with 5.0 g. PhAc, the mixture refluxed 2 h., worked up as in a, and the product hydrolyzed gave 2.33 g. (+)-III, m. 67-8°, [α]_D 3.01° (c 9.6, EtOH). (c) CdCl₂ (6.24 g.) added in 1 batch to PrMgBr solution (from 8.0 g. PrBr), refluxed 90 min. (neg. Gilman test), the suspension treated with 5.5 g. VII and 2.4 g. PhAc in 18 mL. C₆H₆, the mixture heated 6 h., worked up as in a, and the product hydrolyzed gave 2.45 g. (+)-III, m. 68°, [α]_D 5.42° (c 9.05, EtOH). (d) Pr₂Zn (from 3.95 g. ZnBr₂) (prepared like Cd₂Zn) in Et₂O treated with 5.5 g. VII and 2.5 g. PhAc in 18 mL. C₆H₆, the mixture heated 6 h., and worked up as usual gave 2.37 g. (+)-III, m. 70°, [α]_D 3.95° (c 7.60, EtOH). (e) Iodine (7.62 g.) added to 2.4 g. Mg in 40 mL. Et₂O with stirring, treated with 3.6 g. PhAc followed by 2.9 g. VII in 10 mL. C₆H₆ with stirring, the mixture refluxed 4 h., cooled, treated with 10 g. ice and 5N H₂SO₄, and processed as usual gave 1.2 g. (-)-III, m. 60-4°, [α]_D 2.78° (c 6.77, EtOH). Other V treated similarly gave the following results [ester, method, % yield of III, [α]_D, c (in EtOH) given]: (+)-IX, a, 82, 0.43°, 10.68; (-)-VIII, a, 80, 0°, 10.14; (+)-VIII, a, 76, 0°, 9.99; (-)-I, a, 79, -1.13°, 11.87; (-)-II, a, 56, -0.60°, 10.02; (-)-VIII, c, 56, 0°, 9.16; (+)-IX, d, 77, 0.64°, 11.99. BrCH₂CO₂Et in lieu of an optically active V treated by method a gave (±)-III Et ester (XI), b1.2 98-100°, n_{25D} 1.5027, hydrolyzed to (±)-III, m. 71-2°; S-benzylthiuronium salt m. 85-6°. Method c gave 60% (±)-XI, d gave 61% (±)-XI, e gave 43% (±)-XI. (-)-VII (13.5 g.) treated by method a, the resulting oily mixture of 2 diastereoisomeric esters (15.7 g.) allowed to stand, the crystals which deposited collected, washed with 10 mL. petr. ether, and recrystd. 3 times from petr. ether gave 5.22 g. (-)-menthyl (+)-β-hydroxy-β-phenylbutyrate (XII), m. 80-80.5°, [α]_D -31.3° (c 2.02, C₆H₆); the oil from which XII had been removed allowed to stand and the resulting solid recrystd. twice from small vols. of petr. ether gave 0.55 g. (-)-menthyl (-)-β-hydroxy-β-phenylbutyrate, m. 60.5-1.0°, [α]_D -69.8° (c 2.00, C₆H₆), about 95% optical pure. XII (2.0 g.) refluxed 4 h. with 3.1 mL. 2.5N KOH and 7 mL. 96% EtOH, the EtOH distilled, the aqueous residue extracted with Et₂O, acidified, and the product isolated with Et₂O gave 1.1 g. (+)-III, m. 82-3°, [α]_D 8.92° (c 1.76, EtOH). (±)-XI (13.2 g.) in 50 mL. Et₂O added dropwise to 5.82 g. LiAlH₄ in 75 mL. Et₂O with stirring, the mixture kept 2 days at room temperature, treated with 10 mL. H₂O and 75 mL. 5N H₂SO₄, the aqueous layer extracted with Et₂O, the Et₂O solns. combined, washed with H₂O, dried, and distilled gave 5.47 g. (±)-MeCPh(OH)CH₂CH₂OH (XII), b0.75 119.5°, n_{25D} 1.5355, m. 45-6°; 1-(p-nitrobenzoate) m. 91.5-2.0° (aqueous MeOH). XII (2.0 g.) in 50 mL. Et₂O added to 0.49 g. LiAlH₄ in 75 mL. Et₂O, the mixture refluxed 3 h., treated with 2N H₂SO₄, the aqueous layer extracted with Et₂O, the combined Et₂O solns. washed with H₂O, dried, the Et₂O removed, and the residue (1.25 g.) crystallized from 1:1 C₆H₆-petr. ether gave (-)-XIII, m. 62.5°, [α]_D -56.82° (c 1.61, C₆H₆).

magnesium ref

AN 1952:66205 CAPLUS
DN 46:66205
OREF 46:11018e-f
TI Preparation of zinc and **magnesium** for **Reformatsky** and Grignard reagents
AU Huber, F. S.
CS Battelle Memorial Inst., Columbus, O.
SO Chemist-Analyst (1952), 41, 62
CODEN: CHANAA; ISSN: 0095-8484
DT Journal
LA Unavailable
AB The directions given in Hauser and Breslow (Organic Synthesis) are followed for preparing the Zn, but the final ether wash contains about 5 g. white paraffin per l. The Mg turnings are washed rapidly in a Buchner funnel consecutivity with dilute HNO₃, water, EtOH, Me₂CO, and finally with Et₂O containing 5 g. paraffin wax per l. For Grignard reactions hard to start, dissolve 1 g. of I in one l. of the final Et₂O wash.

L2 ANSWER 13 OF 13 CAPLUS COPYRIGHT 2004 ACS on STN
AN 1948:11920 CAPLUS
DN 42:11920
OREF 42:2594e-i
TI The ten dimethylnaphthalenes, their physical properties, molecular compounds, and ultraviolet spectra
AU Bailey, A. S.; Bryant, K. C.; Hancock, R. A.; Morrell, S. H.; Smith, J. C.
CS Trinidad Leaseholds Ltd., King's Langley, Hertsfordshire, UK
SO Journal of the Institute of Petroleum (1947), 33, 503-26
CODEN: JIPEA6; ISSN: 0020-3068
DT Journal
LA Unavailable
AB Of the 10 dimethylnaphthalenes, 8 were synthesized and 2 were prepared by purifying com. materials. The picrate, the styphnate, and the 1,3,5-trinitrobenzene complex of each were made. Of the ultraviolet spectra obtained only those of 2,6- and 1,8-C₁₀H₆Me₂ were considered characteristic enough to be useful for identification in mixts. Because of confusing results in the literature, methods of synthesis were carefully chosen. The 1,2-, 1,4-, and 1,5-isomers were produced by chloromethylation of monomethylnaphthalenes, though the 1,5-compound was more easily produced by chloromethylation of 1-C₁₀H₇CH₂Cl or by bis(chloromethylation) of C₁₀H₈, followed by reduction. To make the 2,6-isomer, Me₂SO₄ was caused to react on the Grignard reagent from 2,6-MeC₁₀H₆I. Three methods were based upon building a 2nd ring onto a C₆H₆ nucleus: (1) the succinic anhydride method on an alkyl benzene gave 1,3-and 1,7-C₁₀H₆Me₂; (2) tolylethyl bromide and the malonic ester synthesis, the 1,6-, 2,7-, and 1,7-isomers; and (3) a **Reformatsky** reaction on o-MeC₆H₄CO₂Me followed by chain-lengthening, 1,8-C₁₀H₈. The phys. properties as measured are tabulated below: Isomer, m.p., b.p., n_D²⁰ pic-rate m.p., styphnate m.p., T.N.B. complex m.p.; 1,2, -1.6°, 266°/760mm., 1.6164, 130°, 143.5°, 147-8°; 1,3, -6 to -5, 263, 1.6078, 116.5, 116-17, 135; 1,4, 5-6, 263, 1.6127, 143, 126, 165-6; 1,5, 81.5, 265, , 138-9, 159, 158; 1,6, -17 to -15, 264, 1.6072, 111, 121-2, 130-1; 1,7, -14 and -28.5, 263, 1.6072, 118.5, 143, 137; 1,8, 63.5, 270, 156, 160-1, 167; 2,3, 104-5, 268, 123-4, 148.5, 136-7; 2,6, 110-11, 261, 141-2, 157-8, 154; 2,7, 96-7, 263, 136, 159, 152;